

CLAIM AMENDMENTS:

1. (Currently Amended) An electric power steering device comprising:
a steering assist electric motor having an output shaft;
a speed reduction mechanism including an input shaft disposed coaxially with the output shaft of the electric motor; and
a power transmission joint which couples the output shaft of the electric motor to the input shaft of the speed reduction mechanism for power transmission, the power transmission joint including an annular first engagement member co-rotatably connected to the output shaft of the electric motor, an annular second engagement member co-rotatably connected to the input shaft of the speed reduction mechanism, and an elastic member disposed between the first and second engagement members for transmitting a torque between the first and second engagement members, wherein:

the elastic member includes an annular main body, and a plurality of engagement arms provided at predetermined intervals circumferentially along the main body and extending radially from the main body,

the first and second engagement members each includes a plurality of engagement projections engaged with [[the]] respective ones of the engagement arms of the elastic member circumferentially along the main body,

each of the engagement arms of the elastic member includes a pair of power transmission faces, which are engaged with power transmission faces of

corresponding engagement projections of the first and second engagement members with interference fits,

the power transmission faces of the engagement arms include ~~[[a]] first power transmission [[face]]~~ faces each having a first interference fit and ~~[[a]] second power transmission [[face]]~~ faces each having a second interference fit, the first interference fit being larger than the second interference fit ~~such that the first power transmission faces flatten at a slower rate than the second power transmission faces;~~ and each of the first power transmission faces being bulged into a first chevron shape, and each of the second power transmission faces being bulged into a second chevron shape different from the first chevron shape, ~~[[and]] each of the first and second engagement members includes~~ including a respective engagement projection that engages a respective first power transmission face of an engagement arm, and another respective engagement projection that engages a respective second power transmission face of an engagement arm, and

the first power transmission faces are disposed radially symmetrically with respect to a center of the annular main body of the elastic member.

2. (Previously presented) An electric power steering device as set forth in claim 1, wherein the engagement arms in a free state not restricted by the first and second engagement members are arranged at intervals which include a relatively great interval and a relatively small interval relative to the relatively great

interval, wherein the relatively great and small intervals are measured circumferentially along the main body.

3. (Previously presented) An electric power steering device as set forth in claim 1, wherein the engagement arms in a free state not restricted by the first and second engagement members include an engagement arm having a relatively great thickness and an engagement arm having a relatively small thickness relative to the engagement arm having the relatively great thickness, wherein the relatively great and small thicknesses are measured circumferentially along the main body.

4. (Previously presented) An electric power steering device as set forth in claim 1, wherein at least one of the first and second engagement members is a varying-interval engagement member, the varying-interval engagement member having engagement projections arranged at intervals which include a relatively great interval and a relatively small interval relative to the relatively great interval, wherein the great and small intervals are measured circumferentially along the varying-interval engagement member.

5. (Previously presented) An electric power steering device as set forth in claim 1, wherein at least one of the first and second engagement members is a varying-projection-thickness engagement member, the varying-

projection-thickness engagement member including an engagement projection having a relatively great thickness and an engagement projection having a relatively small thickness relative to the engagement projection having the relatively great thickness, wherein the relatively great and small thicknesses are measured circumferentially along the varying-projection-thickness engagement member.

6. (Original) An electric power steering device as set forth in claim 1, wherein at least one of the power transmission faces of the engagement arms includes a cam surface which increases circumferential compression of the elastic member as the first and second engagement members axially approach each other.

7. (Original) An electric power steering device as set forth in claim 1, wherein at least one of the engagement projections of at least one of the first and second engagement members has a cam surface which increases circumferential compression of the elastic member as the first and second engagement members axially approach each other.

8. (Previously presented) An electric power steering device as set forth in claim 2, wherein the engagement arms in the free state not restricted by the first and second engagement members include an engagement arm having a relatively

great thickness and an engagement arm having a relatively small thickness relative to the engagement arm having the relatively great thickness, wherein the relatively great and small thicknesses are measured circumferentially along the main body.

9. (Previously presented) An electric power steering device as set forth in claim 4, wherein at least one of the first and second engagement members is a varying-projection-thickness engagement member, the varying-projection-thickness engagement member including an engagement projection having a relatively great thickness and an engagement projection having a relatively small thickness relative to the engagement projection having the relatively great thickness, wherein the relatively great and small thicknesses are measured circumferentially along the varying-projection-thickness engagement member.

10. (Previously Presented) An electric power steering device as set forth in claim 1, wherein the power transmission faces each having the first interference fit and the power transmission faces each having the second interference fit are alternatingly arranged with each other around the center of the elastic member.

11. (Currently Amended) An electric power steering device, comprising:
an electric motor having an output shaft;

a speed reduction mechanism including an input shaft disposed coaxially with the electric motor output shaft; and

a power transmission joint including

an annular first engagement member including a first plurality of engagement projections, co-rotatably connected to the electric motor output shaft,

an annular second engagement member including a second plurality of engagement projections, co-rotatably connected to the speed reduction mechanism input shaft, ~~shift~~, and

an elastic member having power transmission faces that include a first engagement face connected to the first engagement member and a second engagement face connected to the second engagement member to transmit a torque between the first and second engagement members, and including a plurality of engagement arms extending radially from a circumferential surface of the elastic member and engaged with the first and second engagement members, the plurality of engagement arms increasing in width from the first engagement face to the second engagement face, ~~wherein the first face and the second face are located on the circumferential surface of the elastic member~~

the power transmission faces each engaging with a face of one of the engagement projections with an interference fit, the power transmission faces including first power transmission faces each having a first interference fit and second power transmission faces each having a second interference fit, wherein

each of the first power transmission faces is bulged into a first chevron shape, and each of the second power transmission faces is bulged into a second chevron shape different from the first chevron shape.

the first power transmission faces being disposed radially symmetrically with respect to a center of the elastic member.

12. (Previously Presented) An electric power steering apparatus according to claim 11, wherein the engagement arms form an interference fit with the first and second engagement members.

13. (Currently Amended) A power transmission joint for an electric power steering device that includes an electric motor and a speed reduction mechanism, the power transmission joint coupling an output shaft of the electric motor to an input shaft of the speed reduction mechanism, the power transmission joint comprising:

an annular first engagement member including a first plurality of engagement projections, co-rotatably connected to the electric motor output shaft;

an annular second engagement member including a second plurality of engagement projections, co-rotatably connected to the speed reduction mechanism input shaft; and

an elastic member having power transmission faces that include a first engagement face connected to the first engagement member and a second engagement face connected to the second engagement member to transmit a torque between the first and second engagement members, and including a plurality of engagement arms extending radially from a circumferential surface of the elastic member and engaged with the first and second engagement members, the plurality of engagement arms increasing in width from the first engagement face to the second engagement face, ~~wherein the first face and the second face are located on the circumferential surface of the elastic member~~

the power transmission faces each engaging with a face of one of the engagement projections with an interference fit, the power transmission faces including first power transmission faces each having a first interference fit and second power transmission faces each having a second interference fit, wherein each of the first power transmission faces is bulged into a first chevron shape, and each of the second power transmission faces is bulged into a second chevron shape different from the first chevron shape.

the first power transmission faces being disposed radially symmetrically with respect to a center of the elastic member.

14. (Previously Presented) A power transmission joint as set forth in claim 13, wherein the engagement arms form an interference fit with the first and second engagement members.

15-16. (Cancelled)

17. (Currently Amended) An electric power steering device as set forth in claim 1, wherein the pair of power transmission faces of at least one of the engagement arms includes the first power transmission face and the second power transmission face, and the pair of power transmission faces of at least another one of the engagement arms includes a pair of the second power transmission faces.

18. (Previously Presented) An electric power steering device as set forth in claim 17, wherein a first engagement arm is adjacent a second engagement arm, and the pair of power transmission faces of each the first and second engagement arms includes the first transmission face and the second power transmission face, and a first angle is formed between respective center lines of the first and second engagement arms, and a third engagement arm is adjacent the second engagement arm and includes power transmission faces including the pair of the second power transmission faces, a second angle being formed between a center line of the third engagement arm and the center line of the second engagement arm, the second angle being larger than the first angle.

19. (Currently Amended) An electric power steering device as set forth in claim 17, An electric power steering device comprising:

a steering assist electric motor having an output shaft;

a speed reduction mechanism including an input shaft disposed coaxially with the output shaft of the electric motor; and

a power transmission joint which couples the output shaft of the electric motor to the input shaft of the speed reduction mechanism for power transmission, the power transmission joint including an annular first engagement member co-rotatably connected to the output shaft of the electric motor, an annular second engagement member co-rotatably connected to the input shaft of the speed reduction mechanism, and an elastic member disposed between the first and second engagement members for transmitting a torque between the first and second engagement members, wherein:

the elastic member includes an annular main body, and a plurality of engagement arms provided at predetermined intervals circumferentially along the main body and extending radially from the main body,

the first and second engagement members each includes a plurality of engagement projections engaged with respective ones of the engagement arms of the elastic member circumferentially along the main body,

each of the engagement arms of the elastic member includes a pair of power transmission faces which are engaged with power transmission faces of

corresponding engagement projections of the first and second engagement members with interference fits,

the power transmission faces of the engagement arms include first power transmission faces each having a first interference fit and second power transmission faces each having a second interference fit, the first interference fit being larger than the second interference fit and each of the first and second engagement members includes a respective engagement projection that engages a respective first power transmission face of an engagement arm, and another respective engagement projection that engages a respective second power transmission face of an engagement arm, and

the first power transmission faces are disposed radially symmetrically with respect to a center of the annular main body of the elastic member,

wherein the pair of power transmission faces of each of a plurality of the engagement arms includes the first power transmission face and the second power transmission face, and the pair of power transmission faces of each of a plurality of the engagement arms includes a pair of the second power transmission faces, and

wherein adjacent engagement arms that each include the first power transmission face and the second power transmission face are spaced closer together than adjacent engagement arms that each include the pair of the second power transmission faces.

20. (Previously Presented) An electric power steering device as set forth in claim 19, wherein each of the first power transmission faces is adjacent and faces another first power transmission face, further wherein each of the second power transmission faces is adjacent and faces another second power transmission face, the adjacent first power transmission faces being closer together than the adjacent second power transmission faces.

21. (New) An electric power steering device, comprising:
an electric motor having an output shaft;
a speed reduction mechanism including an input shaft disposed coaxially with the electric motor output shaft; and
a power transmission joint including
an annular first engagement member including a first plurality of engagement projections, co-rotatably connected to the electric motor output shaft,
an annular second engagement member including a second plurality of engagement projections, co-rotatably connected to the speed reduction mechanism input shaft, and
an elastic member having power transmission faces including a first engagement face connected to the first engagement member and a second engagement face connected to the second engagement member to transmit a

torque between the first and second engagement members, and including a plurality of engagement arms extending radially from a circumferential surface of the elastic member, the plurality of engagement arms increasing in width from the first engagement face to the second engagement face,

the power transmission faces being on the engagement arms and each engaging with a face of one of the engagement projections with an interference fit, the power transmission faces including a plurality of first power transmission faces having a first interference fit and a plurality of second power transmission faces having a second interference fit, the first interference fit being larger than the second interference fit and each of the first and second engagement members includes a respective engagement projection that engages a respective first power transmission face of an engagement arm, and another respective engagement projection that engages a respective second power transmission face of an engagement arm, and

the first power transmission faces are disposed radially symmetrically with respect to a center of the elastic member, wherein a pair of power transmission faces of each of a plurality of the engagement arms includes the first power transmission face and the second power transmission face, and a pair of power transmission faces of each of a plurality of the engagement arms includes a pair of the second power transmission faces, and

wherein adjacent engagement arms that each include the first power transmission face and the second power transmission face are spaced closer

together than adjacent engagement arms that each include the pair of the second power transmission faces.

22. (New) A power transmission joint for an electric power steering device that includes an electric motor and a speed reduction mechanism, the power transmission joint coupling an output shaft of the electric motor to an input shaft of the speed reduction mechanism, the power transmission joint comprising:

an annular first engagement member including a first plurality of engagement projections, co-rotatably connected to the electric motor output shaft;

an annular second engagement member including a second plurality of engagement projections, co-rotatably connected to the speed reduction mechanism input shaft; and

an elastic member having power transmission faces including a first engagement face connected to the first engagement member and a second engagement face connected to the second engagement member to transmit a torque between the first and second engagement members, and including a plurality of engagement arms extending radially from a circumferential surface of the elastic member, the plurality of engagement arms increasing in width from the first engagement face to the second engagement face,

the power transmission faces being on the engagement arms and each engaging with a face of one of the engagement projections with an interference

fit, the power transmission faces including first power transmission faces each having a first interference fit and second power transmission faces each having a second interference fit, the first interference fit being larger than the second interference fit and each of the first and second engagement members includes a respective engagement projection that engages a respective first power transmission face of one of the engagement arms, and another respective engagement projection that engages a respective second power transmission face of one of the engagement arms, and

the first power transmission faces are disposed radially symmetrically with respect to a center of the elastic member, wherein a pair of power transmission faces of each of a plurality of the engagement arms includes the first power transmission face and the second power transmission face, and a pair of power transmission faces of each of a plurality of the engagement arms includes a pair of the second power transmission faces, and

wherein adjacent engagement arms that each include the first power transmission face and the second power transmission face are spaced closer together than adjacent engagement arms that each include the pair of the second power transmission faces.